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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,511	03/30/2001	Srinivas Kandala	8371-119	8707

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EXAMINER	
SHINGLES, KRISTIE D	
ART UNIT	PAPER NUMBER
2141	

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/823,511	KANDALA, SRINIVAS	
	Examiner	Art Unit	
	Kristie Shingles	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Per Applicant's Request for Continued Examination:

Claims 1, 5, 11, 15, 21 and 25 have been amended.
Claims 1-30 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/21/2005 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 5, 11, 15, 21 and 25 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1, 5, 6, 8, 9, 11, 15, 16, 18, 19, 21, 25, 26, 28 and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Omi et al* (US 6,850,489) in view of *Aaronson et al* (US 6,363,062).

a. **Per claim 5**, *Omi et al* teach the device comprising:

- a memory (col.10 lines 28-35 and 44-46); and
- a processor coupled with the memory, the processor adapted to: wirelessly transmit a reservation request to another device for wireless communications with the another device (col.6 line 56-col.7 line 7, col.7 lines 20-24);
- during the first time window, wirelessly receive a rescheduling frame enabling wireless communications for the second time window to begin before the end time of the first time window (col.9 lines 4-17);
- dynamically reschedule wireless communications during the second time window to begin before the end of the first time window in response to the rescheduling frame (col.9 lines 4-17); and
- wirelessly exchange data during the rescheduled second time window before the first time window ends (col.9 lines 4-17, col.10 lines 3-18).

Omi et al teach wirelessly communicating reservation packets to inform each transmitting station of the reserved bandwidth and the valid reservation period (col.7 lines 34-67, col.8 lines 31-36, col.9 lines 4-62). Yet, *Omi et al* fail to explicitly disclose wirelessly receiving a multi-poll scheduling frame and decoding from the multi-poll scheduling frame a schedule for wireless communications with the another device during a first time window having a defined start time and end time and for subsequent wireless communications during a second time window having a defined start time and end time that does not overlap with the first time window during which to exchange data. However, *Aaronson et al* teach the device wirelessly receiving a multi-poll scheduling frame wherein the schedule is wirelessly communicated to

another device indicating the permissible start and end time for data exchange (col.4 lines 38-43, col.5 line 20-col.6 line 24, col.7 lines 39-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Omi et al* with *Aaronson et al* for wirelessly communicating the scheduling frame to the requesting device in order to indicate the specified reserved time period for it device to exchange data with the desired device. This is a common technique used in the art in order to efficiently schedule communication with multiple devices via channels, for the purpose of organizing communication reservation request and reserving the necessary resources for the requested data communication thereby eliminating conflicting/colliding transmissions or over-scheduling.

b. **Claims 1, 11, 15, 21 and 25** contain limitations that are substantially similar to claim 5 and are therefore rejected under the same basis.

c. **Per claims 6, 16 and 26,** *Omi et al* and *Aaronson et al* teach the device of claim 5, *Omi et al* further teach the device wherein the second time window is rescheduled to start immediately after the rescheduling frame (col.9 lines 4-30, col.10 lines 3-28, col.14 lines 1-51).

d. **Per claims 8, 18 and 28,** *Omi et al* and *Aaronson et al* teach the device of claim 5, *Omi et al* further teach the device wherein the processor is further adapted to: decode from the received multi-poll scheduling frame periodicity data about alternating the first time window and the second time window (col.25 line 64-col.26 line 65; *Aaronson et al*: col.5 line 60-col.6 line 43).

e. **Claims 9, 19 and 29** are substantially similar to claims 6, 16 and 26 respectively, and are therefore rejected under the same basis.

5. **Claims 2, 7, 10, 12, 17, 20, 22, 27 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Omi et al* (US 6,850,489) in view of *Aaronson et al* (US 6,363,062) in further view of *Kamel et al* (US 6,374,103).

a. **Per claim 2,** *Omi et al* and *Aaronson et al* teach the device of claim 1, as applied above, yet fail to explicitly teach the device wherein the rescheduling frame is a null frame. However, *Kamel et al* teach time slots filled with null messages for the mobile devices (Abstract, col.1 line 46-col.2 line 6 and col.2 line 48-col.3 line 65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the multi-polling, dynamic scheduling and rescheduling teachings of *Omi et al* and *Aaronson et al* with *Kamel et al* for permitting a null frame in the time slot of the rescheduling process of the transmission to the mobile device for selectively or dynamically filling the frame with a timing value.

b. **Claims 7, 10, 12, 17, 20, 22, 27 and 30** are substantially similar to claim 2 and are therefore rejected under the same basis.

6. **Claims 3, 4, 13, 14, 23 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Omi et al* (US 6,850,489), *Aaronson et al* (US 6,363,062) and *Kamel et al* (US 6,374,103), in further view of *Cohen* (US 6,332,153).

a. **Per claims 3, 13 and 23,** *Omi et al, Aaronson et al,* and *Kamel et al* teach the device of claim 1, yet fail to explicitly teach the device, wherein the generated schedule provides for exchanging data with only the second peripheral device during a second time windows and

that the second time window alternate with the first time window according to a periodicity, and the processor is further adopted to: encode data about the periodicity in the multi-poll scheduling frame. However, *Cohen* teaches exchanging data only with the second device during a predetermined time period and subsequently alternating communication with the second device and the first device periodically while updating indicia identifying the current transmitting device (col.2 lines 2-47, col.6 lines 11-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the multi-polling, scheduling and rescheduling teachings of *Omi et al*, *Aaronson et al* and *Kamel et al* with *Cohen* for permitting periodically alternating the time period for exchanging data with the first device and with the second because this allows for a fixed schedule to be maintained with both devices based on their communication tendency and frequency for exchanging data.

b. **Claims 4, 14 and 24** are substantially similar to claim 2 and are therefore rejected under the same basis.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: *Hjelm et al* (US 6,529,497), *Iwase et al* (US 6,226,263), *Rai et al* (US 6,438,110), *Young* (US 5,719,868), *Chen et al* (US 5,502,724), *Dorenbosch* (US 6,052,562), *Landberg et al* (US 6,965,607), *Stanwood et al* (US 6,956,834), *Quayle* (US 6,317,234), *Kou* (US 5,790,535).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie Shingles whose telephone number is 571-272-3888. The examiner can normally be reached on Monday-Friday 8:30-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kristie Shingles
Examiner
Art Unit 2141

kds

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER